Testimony
Before the Special Committee on Aging
United States Senate

NIMH Research on Geriatric Depression and Suicide

Statement of

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I am pleased to have the opportunity to appear before you to discuss the National Institute of Mental Health's (NIMH) research efforts in the areas of geriatric depression and suicide. We at NIMH are very concerned about the alarming numbers of older adults who suffer from depression and thoughts of suicide, and—because they are too often undiagnosed and untreated—may go on to take their own lives. We understand the heartbreak that the tragedy of suicide causes families, and we want to pursue answers that we can use to prevent suicide and the hopelessness that precedes it. The NIMH Aging Consortium brings together relevant staff from across the Institute specifically to oversee NIMH's aging research portfolio, and to coordinate and strengthen overall efforts in this area. In addition, I chair the NIMH Suicide Research Consortium that oversees the suicide research portfolio.

In 2000, the most recent year national suicide statistics are available, 29,350 Americans took their own lives. U.S. suicide deaths outnumbered homicides (16,765) by more than 5 to 3, and there were twice as many deaths due to suicide than deaths due to HIV/AIDS (14,478).

In 2000, 5,306 persons aged 65 and older died by suicide. This was 18% of all suicides, even though the elderly only comprise 13% of the U.S. population. In the U.S. and other industrialized nations, older males have the highest rates of suicide. See Figure 1, which illustrates suicide rates by age and gender for Whites and African Americans. In this country, it is older *White* males with the highest rate, comprising 81% of all elderly suicides. White men age 80 and older have a suicide rate 6 times (59/100,000) the national average (10.6/100,000).

Here is what we have learned from analyzing death certificates. In addition to illustrating the high rate of elderly suicide, Figure 1 highlights the substantial difference in rates among older African Americans and White Americans. African American rates, particularly for females, are much lower. Consider how powerful this effect is given what we know about overall health care disparities between Whites and African Americans. Since 1996 when I was last here to talk to you about elderly suicide, we have more investigators examining protective factors among certain cultural groups. There is growing evidence to suggest that religious beliefs and social supports provide protection against suicidal thoughts.

In 1996 we described how late onset depression is the most common medical condition among older suicides, and that 70% of older adults have seen a primary care provider in the month before they die. Research conducted since then has confirmed these findings and has also indicated that older adults use methods that are more lethal. Dr. Donna Cohen, one of your expert panelists, will be describing these patterns in more detail. Recent reviews examining patterns of service use before suicide indicate that only about 10% of persons 55 and older had contact with a mental health care provider within a month of their suicide death.

Early indications of these patterns led NIMH in 1997 to issue the Request for Applications (RFA) [1], "Prevention of Suicidal Behavior in Older Primary Care Patients." The RFA requested applicants to test of models of depression and suicidality recognition and treatment. The

[1] A Request for Applications (RFA) is a formal statement that invites grant or cooperative agreement applications in a well-defined scientific area to accomplish specific program objectives. The RFA indicates the estimated amount of funds set aside for the competition, the estimated number of awards to be made, and the application receipt date(s). Applications submitted in response to an RFA usually receive a special review by an initial review group convened by the Institute that issued the RFA.

outcome of the RFA was the funding of a three-site study called **Pr**evention **O**f **S**uicide in **P**rimary care **E**lderly: **C**ollaborative **T**rial, or PROSPECT. This trial tests how the "collaborative care" model—typically a team approach involving nurses or social workers with physicians in primary care practices working to better manage chronic conditions—improves depression treatment through physician and patient education and follow-up.

About the same time PROSPECT was being fielded, several other studies of depressed elderly in primary care were also in the field, supported by the Substance Abuse and Mental Health Services Administration (SAMHSA), the Health Resources and Services Administration (HRSA), the Veterans Administration, and the Hartford Foundation. Dr. Ira Katz, who helped lead several of these efforts, is one of your expert panelists today, and he can describe these studies in more detail.

While PROSPECT remains the most directly targeted research investment in reducing elderly suicide, the NIMH portfolio on aging and suicide research has kept pace with overall NIMH funding increases. In 1996, NIMH spent $641,000 for support of studies of suicide in the elderly and $52 million in aging research. In 2002, NIMH spent $2.3 million for support of studies of suicide in the elderly, and $106 million in aging research, representing approximately a doubling of dollars in those 7 years.

In addition to studies focused on elderly suicide, we have learned from studies of medical illnesses and depression that late life depression can be deadly in other ways. There is now irrefutable evidence that persons with myocardial infarction and depression and persons with hip fractures who suffer depression are at significantly increased risk for death as opposed to their nondepressed counterparts. The potency of the effects of depression for increased risk for death is just as strong as smoking, obesity, or hypertension. We have also learned a great deal more about vascular depression, a subtype of late-life depression that was just beginning to be recognized in 1996. Vascular depression occurs in later life, and appears to be due to small but numerous cerebrovascular accidents (or "small strokes") that can occur in the parts of the brain responsible for mood regulation. Like other types of late-life depression, including those in people who have had depressive episodes earlier in their life, we now know that vascular depression responds to treatment with the same anti-depressant medications used with younger adults.

We are now beginning to fund research that is testing approaches to *preventing* depression among stroke victims, as well as persons threatened with blindness because of macular degeneration. Investigators are fairly certain that by preventing depression in these conditions, older persons will be able to function more fully in their day-to-day lives as well as having improved emotional well-being. Other advances in late-life depression research have come from powerful new technologies that have been developed to study the brain. For instance, researchers have used neuroimaging to identify brain receptors for serotonin, a neurotransmitter for mood regulation whose activity is increased by anti-depressant medications; also, as I mentioned above, the discovery of vascular depression depended on high-resolution magnetic resonance imaging (MRI) scans of the vascular structure of the brain. These and other new directions are described in NIMH's Strategic Plan for Mood Disorders called "**Breaking Ground, Breaking Through."** While we still have far to go on decreasing stigma about

mental disorders in later life, the 1999 Surgeon General's report on Mental Health was a milestone in informing the public that good mental health is a fundamental part of health for all age groups.

Many of these depression and aging research advances came from NIMH centers focused on neuroscience or intervention and services research. These centers are important resources for "pilot testing" new research ideas, "hubs" that can link investigators in collaborative studies with other academic as well as community sites, and they provide rich training opportunities for both established investigators who are "re-tooling" and for new investigators.

Since 1996, we have substantially increased the number of funded treatment studies focused specifically on reducing suicidality. These include studies of treatments to reduce thoughts of suicide in the context of mental illnesses, as well as preventing another suicide attempt. Figure 2 illustrates an over 10-fold increase in funds awarded between 1996 and 2002. Early success with treatments that were focused specifically on targeting suicidal thoughts and behaviors suggests that this may be a necessary step to prevent future suicide risk, in addition to providing individuals adequate treatment for their mental or substance use disorder. To investigate this possibility further, NIMH, the National Institute on Drug Abuse (NIDA), and the National Institute on Alcohol Abuse and Alcoholism (NIAAA) are collaborating on a soon to be released RFA on "Developing Centers on Intervention for the Prevention of Suicide." This RFA builds on recommendations from a 2002 Institute of Medicine report, **Reducing Suicide: A National Imperative**, which highlighted the limited evidence-based approaches for treating suicidal individuals, including older adults at risk. With NIMH, NIDA and NIAAA are also soon issuing a Program Announcement (PA), "Research on the Reduction and Prevention of Suicidality." This PA signals to the field needed areas of suicide research in risk, protection, and services, in addition to intervention research.

Other NIMH steps underway to increase knowledge in suicide prevention include efforts to: network neuroscience researchers who study postmortem tissue to share tissue samples and findings to understand more about the biological underpinning of suicide; gather information on how to more safely and fairly design and carry out trials with persons at risk for suicide (instead of excluding them as industry trials usually do); determine how best to help family members who have lost someone to suicide; and help States evaluate their public message campaigns on suicide prevention.

In closing, I want to emphasize that NIMH collaborates with the other Public Health Service agencies within the Department of Health and Human Services (HHS), as well as with the Department of Veterans Affairs and the Department of Defense, to build more evidence-based practices for suicide prevention generally. With regard to suicide prevention in the elderly, we are participating with the HHS Administration on Aging on providing technical assistance at an upcoming National Summit conference this September regarding recognition and treatment of depression, anxiety, and substance use in the elderly. I am very optimistic that the depression and suicide prevention research supported by NIH will soon be allowing us to make evidence-based practice recommendations. But that will not be enough. We will still need to overcome ageism and stigma around suicide and mental illness in later life; otherwise, these effective treatments will continue to be tragically underutilized. Hearings such as this help practitioners,

researchers, policy makers, and the public understand that depression and suicidality in late life are NOT a normal part of aging. Thank you for this opportunity. I would be happy to answer any questions you may have.

Figure 1.

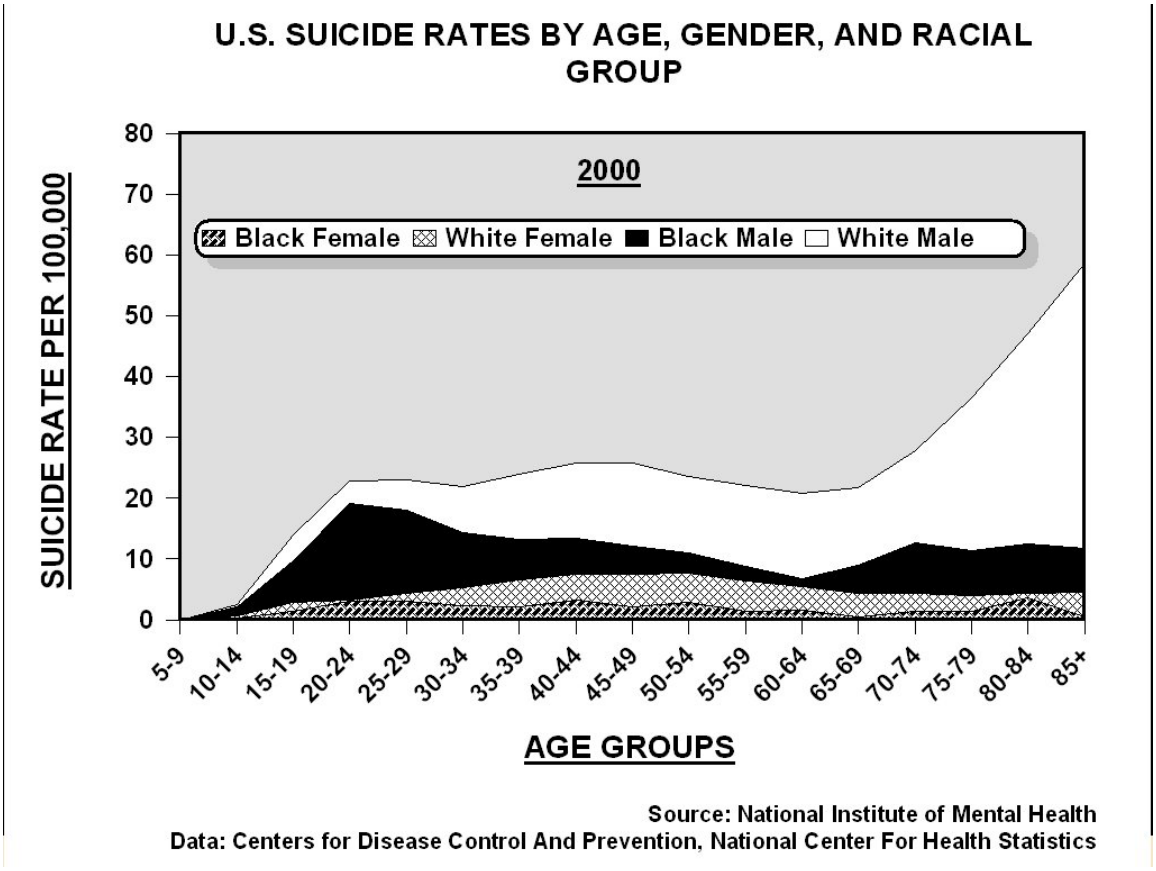
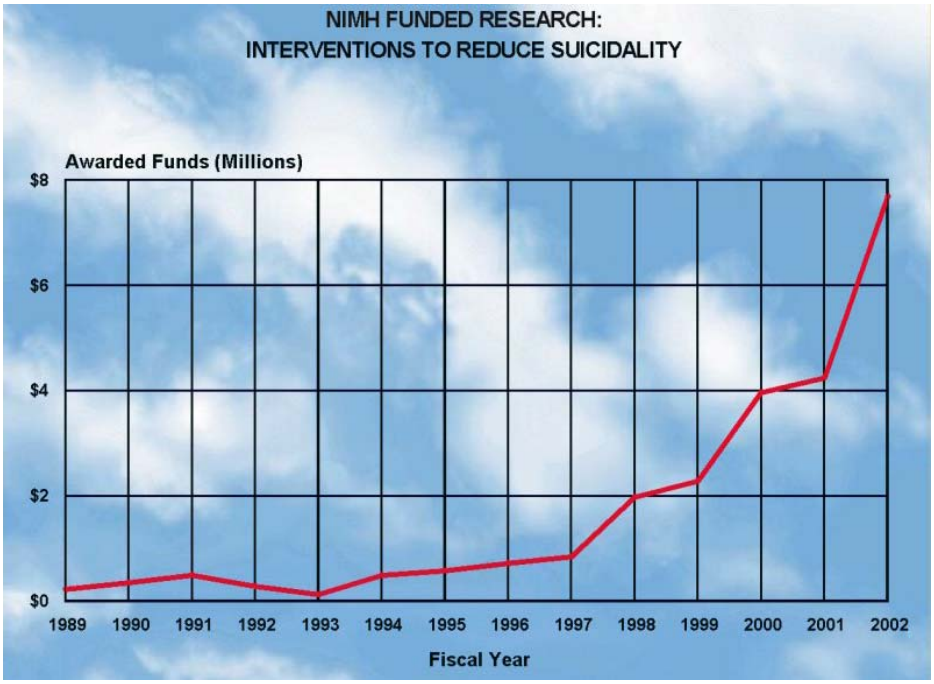

U.S. SUICIDE RATES BY AGE, GENDER, AND RACIAL GROUP
2000
Black Female
White Female
Black Male
White Male
SUICIDE RATE PER 100,000
0
10
20
30
40
50
60
70
80
5-9
10-14
15-19
20-24
25-29
30-34
35-39
40-44
45-49
50-54
55-59
60-64
65-69
70-74
75-79
80-84
85+
AGE GROUPS
Source: National Institute of Mental Health
Data: Centers for Disease Control And Prevention, National Center For Health Statistics

Figure 2.


NIMH FUNDED RESEARCH:
INTERVENTIONS TO REDUCE SUICIDALITY
Awarded Funds (Millions)
$8
$6
$4
$2
$0
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
Fiscal Year